

AMENDMENT UNDER 37 C.F.R. §1.111
U.S. Appln. No. 10/662,358

Q77446

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-5. (canceled).

6. (currently amended) A bacteria The transformed microorganism according to Claim 5 transformed with a recombinant vector comprising a polynucleotide encoding amino acids 1 to 681 of SEQ ID NO:1, wherein said bacteria lacks a functional *fadB* gene, and wherein said bacteria comprises a polyhydroxyalkanoate (PHA) synthase gene, which is deleted of a *fadB* gene and which contains a *PHA* synthase gene.

7. (currently amended) The transformed bacteria microorganism according to Claim 6, wherein the which is transformed with a recombinant vector comprises containing the PHA synthase gene or in which the PHA synthase gene is cloned into a chromosome.

8. (currently amended) The transformed bacteria microorganism according to Claim 6, wherein in which the PHA synthase gene is *phaC*.

9. (currently amended) A method for producing middle-chain-length polyhydroxyalkanoate (MCL-PHA), which comprises the steps of:

- (i) culturing the bacteria microorganism according to Claim 6 in a medium containing a C6-10 carbon source under conditions promoting production of MCL-PHA; and
- (ii) recovering obtaining MCL-PHA consisting of monomers with 6-10 carbon atoms from the bacteria of (i).

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10. (currently amended) MCL-PHA which is produced by the method according to Claim 9 under conditions such that so that the content of each of 3-hydroxyoctanoate (3HO monomers and 3-hydroxydecanoate (3HD) monomers in the MCL-PHA produced is each comprise more than 30% of monomers comprising the MCL-PHA produced mol%.

11. (new) The bacteria according to Claim 6, wherein the PHA synthase gene is integrated into a chromosome of the bacteria

12. (new) The bacteria according to Claim 6, wherein said bacteria lacks a functional, endogenous *maoC* gene.

13. (new) The bacteria according to Claim 6, wherein said bacteria is *E. coli*.

14. (new) The bacteria according to Claim 6, wherein said bacteria is a *fadB* deletion mutant.